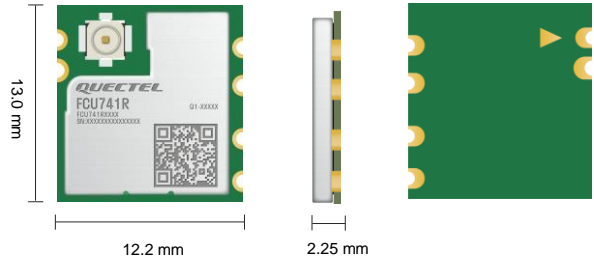


Quectel FCU741R

Wi-Fi 4 Module

Ultra-compact LCC Package



FCU741R is a high-performance Wi-Fi 4 module launched by Quectel, supporting 2.4 GHz and 5 GHz frequencies. It can be used for WLAN connection. With an ultra-compact size of 13.0 mm × 12.2 mm × 2.25 mm, the module optimizes the size and cost for end-products, which fully meets the demands of size-sensitive applications.

Designed with a reliable USB 2.0 interface, the module can ensure high sensitivity in interference environments, and the maximum data rate can be up to 150 Mbps. The module supports two antenna designs: first generation RF coaxial connector and pin antenna interface.

Surface-mount technology (SMT) makes FCU741R an ideal solution for durable and rugged designs. The low profile and small size of LCC package ensure that it can be easily embedded into size-constrained applications and provide reliable connectivity with these applications. The advanced package and the laser-engraved label with better heat dissipation and indelible markings allow for large-scale automated manufacturing which has strict requirements on cost and efficiency.



Key Features

- ✓ Wi-Fi 4 module, supporting 2.4 GHz/ 5 GHz Wi-Fi bands
- ✓ USB 2.0 interface which features higher data transmission rate and low power consumption
- ✓ Faster time-to-market: simple design minimizes design-in time and development efforts
- ✓ Operating temperature range: -20 °C to +70 °C



Ultra-compact Size



LCC Package



IEEE 802.11
a/b/g/n



USB 2.0
Interface



Operating Temperature
Range: -20 °C to +70 °C

Wi-Fi 4		FCU741R	
WLAN Protocol		IEEE 802.11a/b/g/n	
Wi-Fi Frequency Band		2.4 GHz/ 5 GHz	
Wi-Fi Antenna		1 × 1	
Wi-Fi Modulation Mode		CCK/ DBPSK/ DQPSK/ BPSK/ QPSK/ 16QAM/ 64QAM	
Encryption Mode		WPA3	
Wi-Fi Operating Mode		AP/ STA	
Dimensions		13.0 mm × 12.2 mm × 2.25 mm	
Weight		Approx. 0.68 g	
Temperature Range			
Operating Temperature		-20 °C to +70 °C	
Data Rate (Max.)			
802.11a		54 Mbps	
802.11b		11 Mbps	
802.11g		54 Mbps	
802.11n		150 Mbps	
Interfaces			
USB 2.0		× 1 (for Wi-Fi)	
Wi Fi Antenna		× 1	
Electrical Features			
Power Supply Voltage		VBAT: 3.0–3.6 V, Typ. 3.3 V	
Power Consumption		Max. current at Tx mode: 400 mA @ VBAT	
Certification			
Regulatory		Europe: CE America: FCC China: SRRC Canada: IC Australia/New Zealand: RCM Japan: JATE/ TELEC South Korea: KC*	
Wi-Fi Performance			
		Receiver Sensitivity (Typ.)	Transmit Power (Typ.)
2.4 GHz	802.11b/1 Mbps	-98 dBm	21 dBm
	802.11b/11 Mbps	-88.5 dBm	21 dBm
	802.11g/6 Mbps	-94 dBm	19 dBm
	802.11g/54 Mbps	-77 dBm	19 dBm
	802.11n/HT20 MCS 0	-94 dBm	19 dBm
	802.11n/HT20 MCS 7	-75 dBm	18 dBm
	802.11n/HT40 MCS 0	-91 dBm	19 dBm
	802.11n/HT40 MCS 7	-72 dBm	18 dBm

NOTE:
*: Planning.

Quectel FCU741R

Wi-Fi 4		FCU741R	
Wi-Fi Performance			
		Receiver Sensitivity (Typ.)	Transmit Power (Typ.)
5 GHz	802.11a/6 Mbps	-92.5 dBm	18 dBm
	802.11a/54 Mbps	-75.5 dBm	17 dBm
	802.11n/HT20 MCS 0	-92 dBm	18 dBm
	802.11n/HT20 MCS 7	-73.5 dBm	16 dBm
	802.11n/HT40 MCS 0	-89.5 dBm	18 dBm
	802.11n/HT40 MCS 7	-69.5 dBm	16 dBm

Ordering Code	Antenna	Shielding Cover	Dimensions	Development Board (Only for Debugging)
FCU741RACMD	1st generation RF coaxial connector	With shielding cover	13.0 mm × 12.2 mm × 2.25 mm	FCU741RACTA
FCU741RADMD	Pin antenna interface	With shielding cover	13.0 mm × 12.2 mm × 2.25 mm	FCU741RADTA